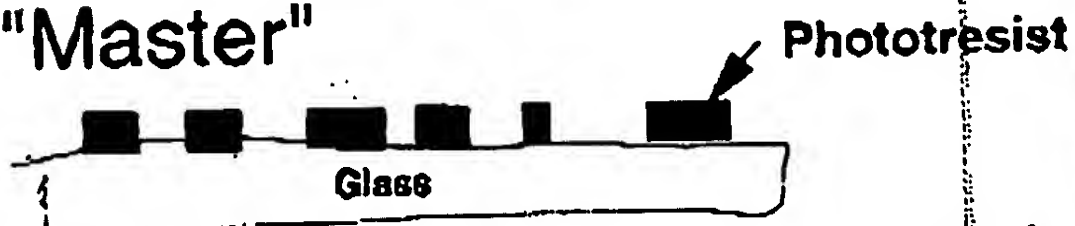


Figure 1: Printing and Plating. Typical schematic procedure for making stamp from photoresist master r pattern, inking with thiol, stamping thiol on gold to form SAM protective pattern, etching away unprotected gold, lectrol ss plating of c pper

lines on top of remaining gold.

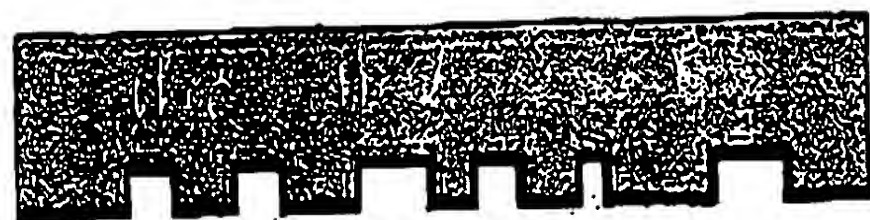
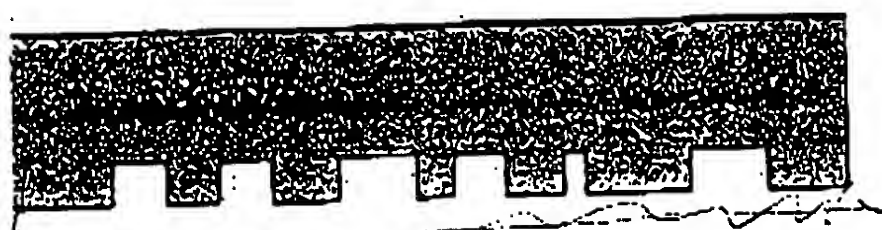
"Master"



Cure



"Stamp"

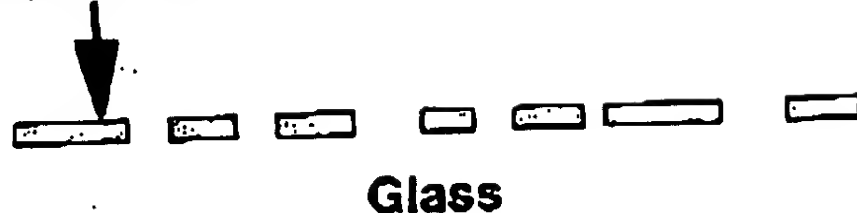


Thiol Ink (SAM)

Thiol Ink (SAM)



Etched Au



Electroless Copper

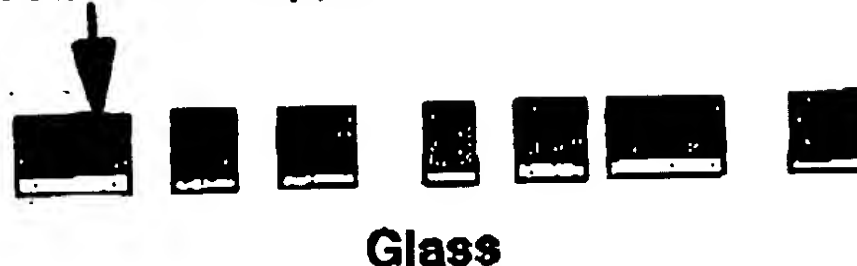


Figure 2: Standard one-step curing me

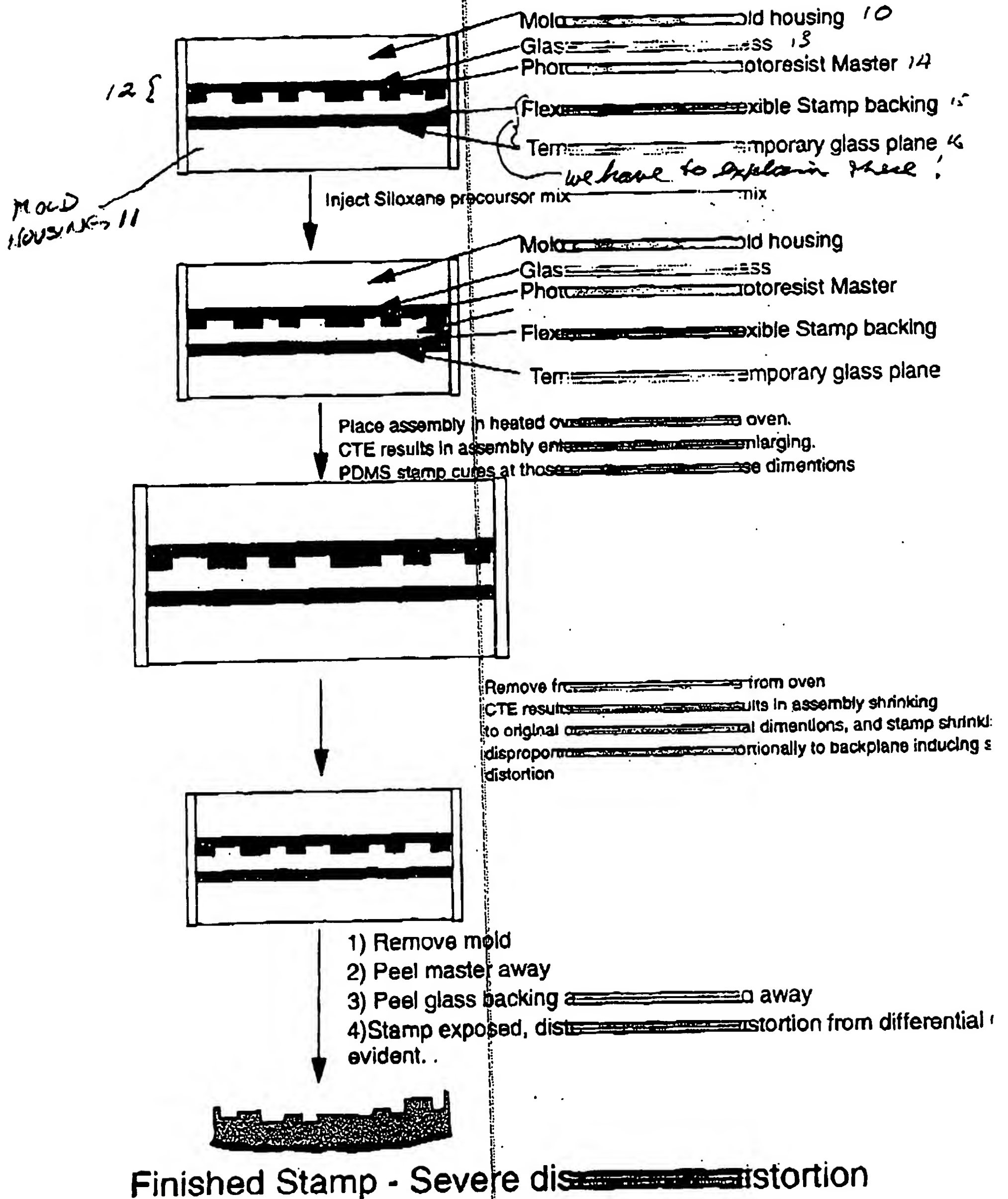
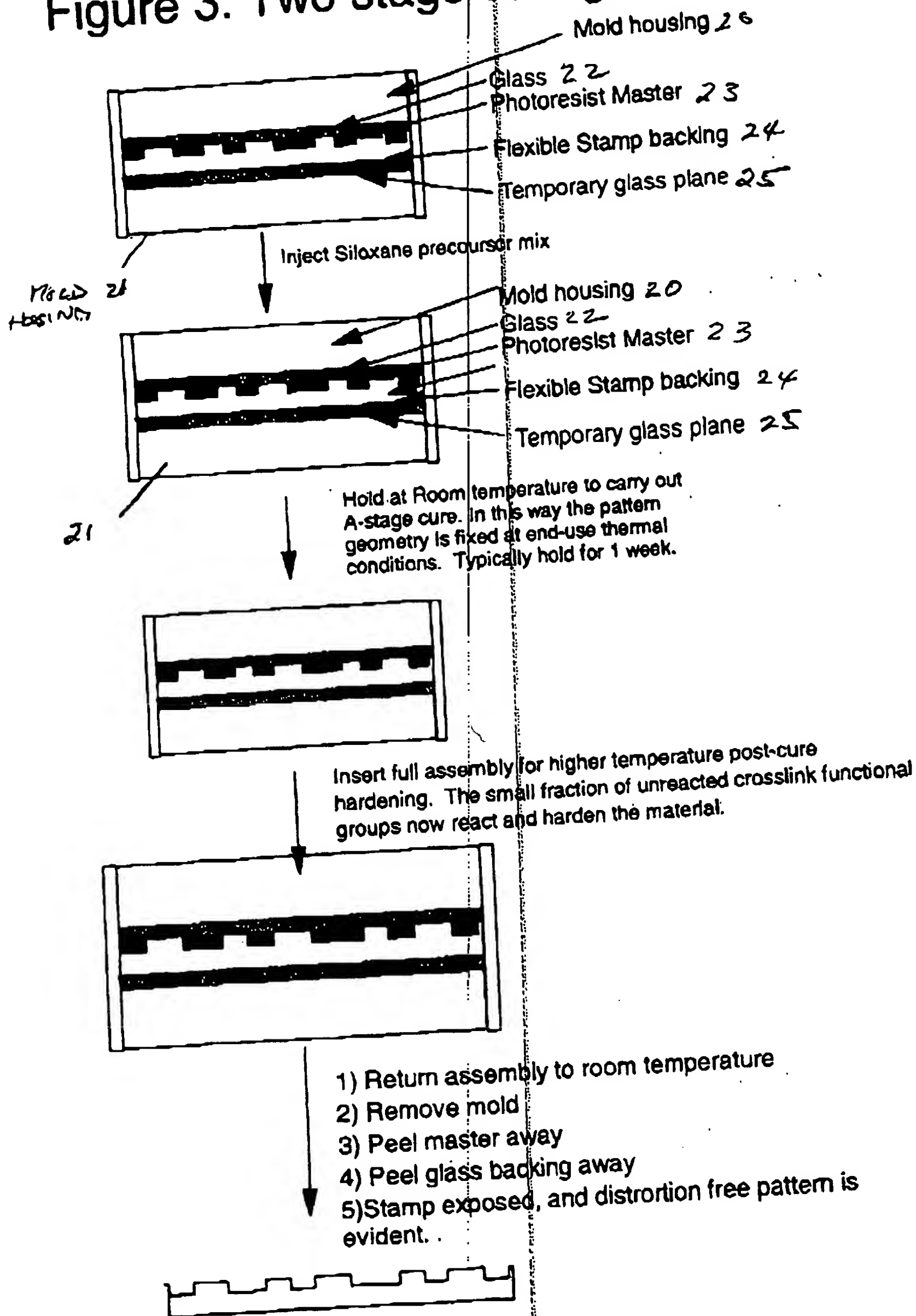


Figure 3: Two stage curing of siloxane stamp.



Finished Stamp - Little distortion evident

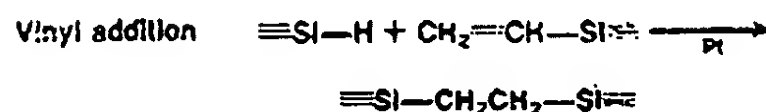
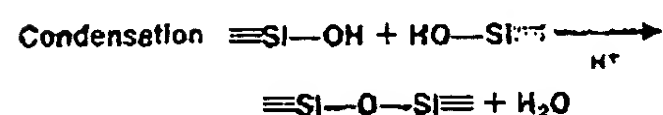
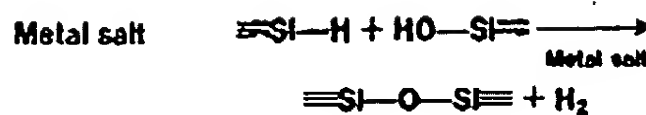
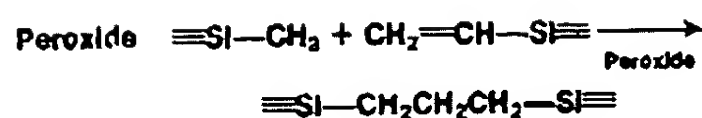
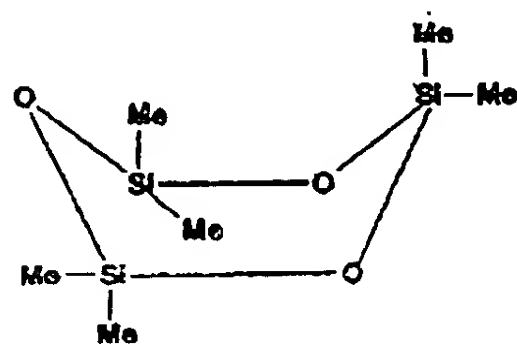
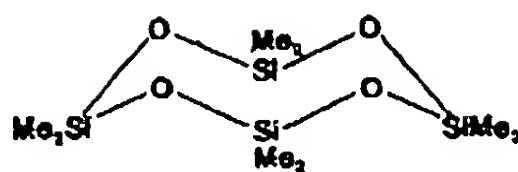


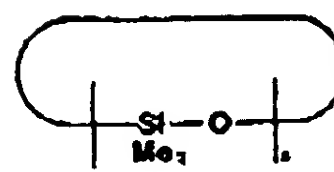
Figure 4 Silicone curing systems



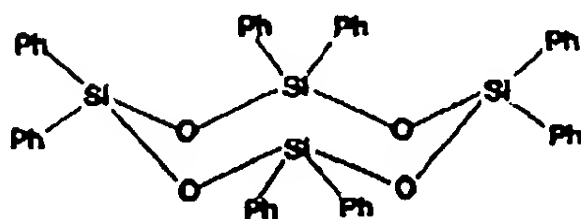
Hexamethylcyclotrisiloxane



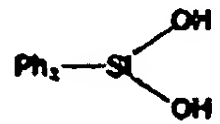
Octamethylcyclotetrasiloxane



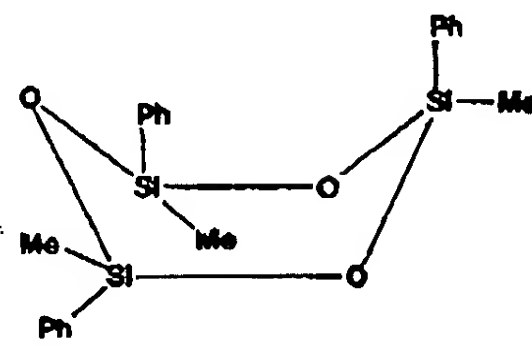
Decamethylcyclopentasiloxane



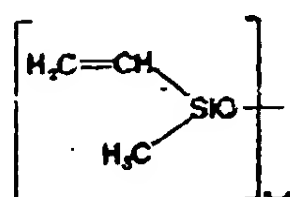
Octaphenylcyclotetrasiloxane



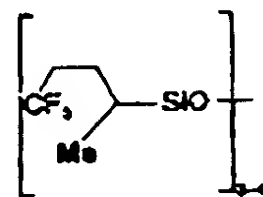
Diphenylsilanediol



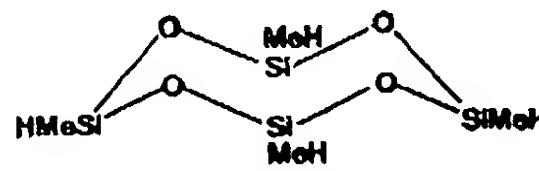
Trimethyltriphenylcyclotrisiloxane



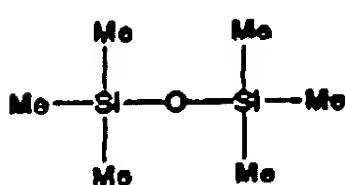
Vinylmethylcyclosiloxanes



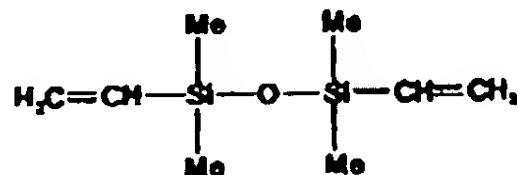
Trifluoropropylmethylcyclosiloxanes



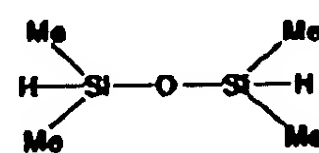
Methylhydrocyclosiloxane



Hexamethyldisiloxane



Divinyltetramethyldisiloxane



Tetramethyldisiloxane

Figure 5 Silicone monomers and terminators